

GLASS COMPOSITION, ITS PRODUCTION AND PRODUCTION OF GLASS FIBER

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Inventors: HOSHINO KOICHI; KANO KOJI; KANAMORI TERUHISA; SHIMIZU MAKOTO

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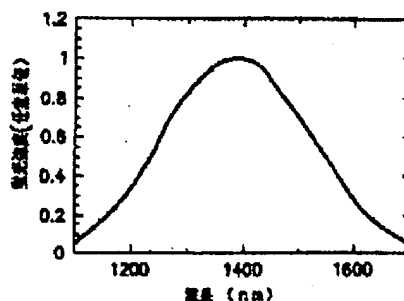
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Abstract of JP2000302477

PROBLEM TO BE SOLVED: To obtain a glass composition having exhibiting laser oscillation or optical amplification activities in an extremely wide wave length range, and having wide luminous characteristics having the center wave length in 1.2-1.6 μm zone important for an optical communication wave length range and usable for a laser or optical amplification, and ferromagnetic characteristics capable of being applied to a powder permanent magnet, and further to provide a method for producing the glass composition. **SOLUTION:** A fine crystal containing luminous species Ni^{2+} ion and a fine particle of ferromagnetic metal Ni in a glass is formed by using a glass composition consisting essentially of at least one kind of SiO_2 or GeO_2 , at least one kind selected from Al_2O_3 and Ga_2O_3 , at least one kind selected from ZnO , TiO_2 and Nb_2O_5 , an alkali metal oxide and an alkaline earth metal oxide, and controlling the conditions for glass synthesis and reheating treatment.



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